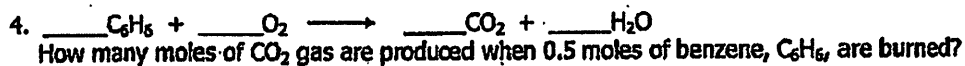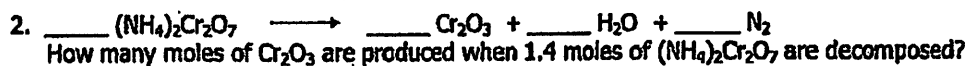# Mole-Mole
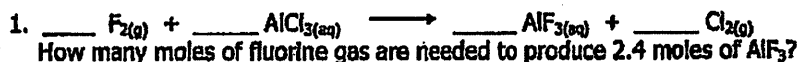# Stoichiometry Practice

Name:

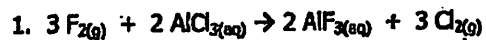Hour:

Balance the following equations, then answer the question that follows.

1. _____ $F_{2(g)}$ + _____ $AlCl_{3(aq)}$ ⟶ _____ $AlF_{3(aq)}$ + _____ $Cl_{2(g)}$
   How many moles of fluorine gas are needed to produce 2.4 moles of AlF_3?

2. _____ $(NH_4)_2Cr_2O_7$ ⟶ _____ Cr_2O_3 + _____ H_2O + _____ N_2
   How many moles of Cr_2O_3 are produced when 1.4 moles of $(NH_4)_2Cr_2O_7$ are decomposed?

3. _____ H_2SO_4 + _____ $NaOH$ ⟶ _____ H_2O + _____ Na_2SO_4
   How many moles of $NaOH$ are needed to neutralize 5 moles of H_2SO_4?

4. _____ C_6H_6 + _____ O_2 ⟶ _____ CO_2 + _____ H_2O
   How many moles of CO_2 gas are produced when 0.5 moles of benzene, C_6H_6, are burned?

5. _____ $Al_2(SO_4)_3$ + _____ $BaCl_2$ ⟶ _____ $BaSO_4$ + _____ $AlCl_3$
   How many moles of $BaCl_2$ are needed to produce 4.1 moles of $BaSO_4$?

Mole-Mass
Stoichiometry Practice

Name:

Hour:

1. $3 F_{2(g)} + 2 AlCl_{3(aq)} \rightarrow 2 AlF_{3(aq)} + 3 Cl_{2(g)}$
   How many moles of fluorine gas are needed to produce 50 g of AlF_3?
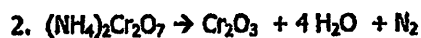
2. $(NH_4)_2Cr_2O_7 \rightarrow Cr_2O_3 + 4 H_2O + N_2$
   How many grams of Cr_2O_3 are produced when 1.2 moles of $(NH_4)_2Cr_2O_7$ are decomposed?
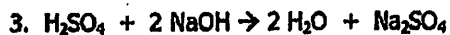
3. $H_2SO_4 + 2 NaOH \rightarrow 2 H_2O + Na_2SO_4$
   How many moles of NaOH are needed to neutralize 520 grams of H_2SO_4?
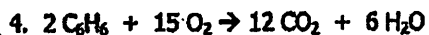
4. $2 C_6H_6 + 15 O_2 \rightarrow 12 CO_2 + 6 H_2O$
   How many moles of CO_2 gas are produced when 85 grams of benzene, C_6H_6, are burned?
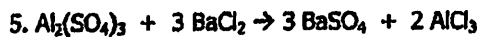
5. $Al_2(SO_4)_3 + 3 BaCl_2 \rightarrow 3 BaSO_4 + 2 AlCl_3$
   How many grams of $BaCl_2$ are needed to produce 4.1 moles of $BaSO_4$?